

ABSTRACT OF THE DISCLOSURE

A first diffractive optical element pattern with a pattern pitch that is no greater than a wavelength of incident light is formed on a first main surface of substrate such as a glass plate. Second diffractive optical element patterns are formed at positions that are respectively incident to positive first-order diffracted light and negative first-order diffracted light produced by the first diffractive optical element pattern. Negative first-order diffracted light produced by each second diffractive optical element pattern is incident upon a boundary face of the substrate at an angle that is smaller than the critical angle, and so exits the substrate.